

EXHIBIT D

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/613,104

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Applicant: Feihong CHEN et al.

Group Art Unit: 2609

Examiner: Wanda Z. Russell

Title: METHODS AND DEVICES FOR CREATING BI-DIRECTIONAL
LSPs

Attorney Docket: 129250-001017/US

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Mail Stop Amendment

RESPONSE

Sir:

In response to the latest Office Action ("Office Action"), the Applicants respond as follows.

A claim listing begins on page 2 of this paper.

Remarks begin on page 15 of this paper.

IN THE CLAIMS

The following is a complete listing of claims with a status identifier in parenthesis. Claims 1, 4, 18, 23, 26, 40, 45, 48 and 56 have been revised to correct a grammatical error. These revisions are not related to the patentability of the claims.

Listing Of Claims:

1. (Currently Amended) A network device operable to:

generate and send a backward path request message to a source of a separately generated, initial forward path request message associated with a forward Label Switched Path (LSP) between the device and the source; and

receive a backward path reservation message from the source in order to establish a backward LSP between the device and the source, wherein the separately established ~~generated~~ forward and backward LSPs form a bi-directional LSP between the device and the source.
2. (Original) The device as in claim 1 further operable to generate and send an initial, forward path reservation message to the source in order to establish the forward LSP after receiving the initial forward path request message.
3. (Original) The device as in claim 1 further operable to generate and send a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

4. (Currently Amended) The device as in claim 3 further operable to separately generate and send a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.
5. (Original) The device as in claim 1 wherein the forward and backward LSPs between the device and source comprise the same path.
6. (Original) The device as in claim 4 wherein the forward and backward LSPs between the device and destination comprise the same path.
7. (Original) The device as in claim 1 further operable to generate the backward path request message based on backward path parameters contained in the initial forward path request message.
8. (Original) The device as in claim 7 further operable to generate the backward path request message based on routing information contained within the parameters.

9. (Original) The device as in claim 7 further operable to query a local database to obtain routing information in order to generate the backward path request message when routing information is not contained within the parameters.

10. (Original) The device as in claim 7 further operable to generate the backward path request message based on a quality-of-service (QoS) indicator contained within the parameters.

11. (Original) The device as in claim 7 further operable to generate the backward path request message based on best effort routing information when a QoS indicator is not contained within the parameters.

12. (Original) The device as in claim 7 wherein the traffic parameters comprise parameters selected from the group consisting of a bi-directional LSP indicator, QoS indicator and routing information.

13. (Original) The device as in claim 1 further operable to request backward traffic parameters from the source when the initial path request message does not contain such parameters.

14. (Original) The device as in claim 1 further operable to generate and send a first delete path message to the source and to receive a second delete path message from the source in order to delete the bi-directional LSP.

15. (Original) The device as in claim 14 further operable to send the first delete path message to the source before receiving the second delete path message from the source.

16. (Original) The device as in claim 14 further operable to send the first delete path message to the source after receiving the second delete path message from the source.

17. (Original) A network device operable to generate and send a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

18. (Currently Amended) The device as in claim 17 further operable to separately generate and send a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.

19. (Original) The device as in claim 18 wherein the forward and backward LSPs between the device and destination comprise the same path.

20. (Original) The device as in claim 17 further operable to generate and send a first delete path message to the destination and to receive a second delete path message from the destination in order to delete the bi-directional LSP.

21. (Original) The device as in claim 20 further operable to send the first delete path message to the destination before receiving the second delete path message from the destination.

22. (Original) The device as in claim 20 further operable to send the first delete path message to the destination after receiving the second delete path message from the destination.

23. (Currently Amended) A method for creating a bi-directional LSP comprising the steps of:

generating and sending a backward path request message to a source of a separately generated, initial forward path request message associated with a forward Label Switched Path (LSP) between the device and the source; and

receiving a backward path reservation message from the source in order to establish a backward LSP between the device and the source, wherein the

separately established ~~generated~~ forward and backward LSPs form a bi-directional LSP between the device and the source.

24. (Original) The method as in claim 23 further comprising the steps of generating and sending an initial, forward path reservation message to the source in order to establish the forward LSP after receiving the initial forward path request message.

25. (Original) The method as in claim 23 further comprising the steps of generating and sending a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

26. (Currently Amended) The method as in claim 25 further comprising the steps of separately generating and sending a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.

27. (Original) The method as in claim 23 wherein the forward and backward LSPs between the device and source comprise the same path.

28. (Original) The method as in claim 26 wherein the forward and backward LSPs between the device and destination comprise the same path.

29. (Original) The method as in claim 23 further comprising the step of generating the backward path request message based on backward path parameters contained in the initial forward path request message.

30. (Original) The method as in claim 29 further comprising the step of generating the backward path request message based on routing information contained within the parameters.

31. (Original) The method as in claim 29 further comprising the step of querying a local database to obtain routing information in order to generate the backward path request message when routing information is not contained within the parameters.

32. (Original) The method as in claim 29 further comprising the step of generating the backward path request message based on a quality-of-service (QoS) indicator contained within the parameters.

33. (Original) The method as in claim 29 further comprising the step of generating the backward path request message based on best effort routing information when a QoS indicator is not contained within the parameters.

34. (Original) The method as in claim 29 wherein the traffic parameters comprise parameters selected from the group consisting of a bi-directional LSP indicator, QoS indicator and routing information.

35. (Original) The method as in claim 23 further comprising the step of requesting backward traffic parameters from the source when the initial path request message does not contain such parameters.

36. (Original) The method as in claim 23 further comprising the steps of generating and sending a first delete path message to the source and receiving a second delete path message from the source in order to delete the bi-directional LSP.

37. (Original) The method as in claim 36 further comprising the step of sending the first delete path message to the source before receiving the second delete path message from the source.

38. (Original) The method as in claim 36 further comprising the step of sending the first delete path message to the source after receiving the second delete path message from the source.

39. (Original) A method for creating a bi-directional LSP comprising the steps of generating and sending a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

40. (Currently Amended) The method as in claim 39 further comprising the steps of separately generating and sending a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.

41. (Original) The method as in claim 40 wherein the forward and backward LSPs between the device and destination comprise the same path.

42. (Original) The method as in claim 39 further comprises the steps of generating and sending a first delete path message to the destination and to receive a second delete path message from the destination in order to delete the bi-directional LSP.

43. (Original) The method as in claim 42 further comprising the step of sending the first delete path message to the destination before receiving the second delete path message from the destination.

44. (Original) The method as in claim 42 further comprising the step of sending the first delete path message to the destination after receiving the second delete path message from the destination.

45. (Currently Amended) A network device comprising:

means for generating and sending a backward path request message to a source of a separately generated, initial forward path request message associated with a forward Label Switched Path (LSP) between the device and the source; and

means for receiving a backward path reservation message from the source in order to establish a backward LSP between the device and the source, wherein the separately established ~~generated~~ forward and backward LSPs form a bi-directional LSP between the device and the source.

46. (Original) The device as in claim 45 further comprising means for generating and sending an initial, forward path reservation message to the source in order to establish the forward LSP after receiving the initial forward path request message.

47. (Original) The device as in claim 45 further comprising means for generating and sending a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

48. (Currently Amended) The device as in claim 47 further comprising means for separately generating and sending a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.

49. (Original) The device as in claim 45 wherein the forward and backward LSPs between the device and source comprise the same path.

50. (Original) The device as in claim 45 wherein the forward and backward LSPs between the device and destination comprise the same path.

51. (Original) The device as in claim 45 further comprising means for generating the backward path request message based on backward path parameters contained in the initial forward path request message.

52. (Original) The device as in claim 51 further comprising means for generating the backward path request message based on routing information contained within the parameters.

53. (Original) The device as in claim 51 further comprising means for querying a local database to obtain routing information in order to generate the backward path request message when routing information is not contained within the parameters.

54. (Original) The device as in claim 51 further comprising means for generating the backward path request message based on a quality-of-service (QoS) indicator contained within the parameters.

55. (Original) A network device comprising means for generating and sending a backward path reservation message to a destination after receiving a backward path request message from the destination in order to establish a backward LSP between the device and the destination.

56. (Currently Amended) The device as in claim 55 further comprising means for separately generating and sending a forward path request message to the destination in order to establish a forward LSP between the device and the destination, wherein the separately established ~~generated~~ forward and

backward LSPs between the device and the destination form a bi-directional LSP between the device and the destination.

REMARKS

A. The Section 102 Rejections

Claims 1-56 were rejected under 35 U.S.C. §102(e) based on U.S. Patent Publication No. 2002/0109879 to Lin Wing So (“So”). Applicants respectfully disagree and traverse these rejections for at least the following reasons.

Each of claims 1-56 include the feature of the establishment of a backward Label Switched Path (“LSP”). In contrast, So does not disclose the establishment of LSPs. While So mentions LSPs, there is no discussion of how an LSP is established, much less the establishment of an LSP through the use of path request and reservation messages as in claims 1-56.

Conclusion:

Accordingly, because So does not disclose each and every feature of the claims 1-56 it cannot anticipate these claims. Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-56.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John E. Curtin, Esq. at the telephone number listed below.

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Docket No. 129250-001017/US

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3777 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC.

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